Use the following diagram for questions 1 - 5

*j*

*k*

*l*

1 2

3 4

5 6

7 8

1. Which pair of angles in the diagram are alternate interior angles?

1. 1 & 2
2. 1 & 8
3. 4 &5
4. 1& 4

2. Which pair of angles in the diagram form a linear pair?

1. 1 & 4
2. 3 & 5
3. 1 & 2
4. 4 & 5

3. In order for 3 and 6 to be congruent, which of the following statements must be true?

1. Lines *j*, *k,* and *l* must be the same length
2. *m* 1 + *m* 2 + *m* 3 + *m* 4 = 180o
3. Lines *j* and *l* must be perpendicular
4. Lines *j* and *k* must be parallel

4. If line *j* is perpendicular to line *l* and line *k* is also perpendicular to line *l*, what can you conclude?

1. Lines *j* and k must be congruent
2. Lines *j* and k must be parallel
3. *m* 1 + *m* 2 + *m* 3 + *m* 4 = 180o
4. Both B and C

5. Which of the following angles are same side interior angles?

1. 1 & 7
2. 3 & 5
3. 1 & 4
4. 4 & 5

Use the following diagram for questions 6 – 10 

*m*

*n*

*p*

1 2

3 4

5 6

7 8

6. Which of the following pairs of angles are supplementary?

1. 1 & 2
2. 5 & 8
3. 4 & 6
4. Both A and C

7. Which of the following pairs of angles area congruent?

1. 1 & 2
2. 6 & 7
3. 1 & 5
4. Both B and C

8. *m*5 + *m*7 = 180o. What other equation must be true?

1. *m*4 + *m*7 = 180o
2. *m*1 + *m*5 = 180o
3. *m*2 + *m*7 = 180o
4. *none of these*

9. If *m*4 = 30o and the *m*1 = (2x + 5) o, what is the value of x?

1. 17.5
2. 12.5
3. 70
4. The value cannot be determined.

10. *m*5=(2x+1)o *m*6=(x + 3)o *m*7=(x + 8)o *m*8 = (4x + 4)o Solve for x.

1. x = 43
2. x = 20.5
3. x = 47
4. the value of x cannot be determined